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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,520	09/09/2003	Shigeaki Fukushima	6340-000039	1939
27572	7590	05/30/2006	EXAMINER	
HARNES, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			BINDA, GREGORY JOHN	
			ART UNIT	PAPER NUMBER
			3679	

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/658,520	FUKUSHIMA ET AL.	
	Examiner	Art Unit	
	Greg Binda	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006 and 21 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5 and 7-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No: \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date: _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____  | 6) <input type="checkbox"/> Other: _____                                    |

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1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

*Continued Examination Under 37 CFR 1.114*

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed April 21, 2006 in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 21, 2006 has been entered.

*Election/Restrictions*

3. Claims 2 & 6 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election of Species I shown in Figs. 1-3 was made **without** traverse in the reply filed on June 1, 2005.

*Terminal Disclaimer*

4. The terminal disclaimer filed on February 21, 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U. S. Patent Nos. 6,497,515 and 6,773,165 has been reviewed and is NOT accepted. The assignee has not established its ownership interest in the patent, in order to support the terminal disclaimer. There is no submission in the record establishing the ownership interest by either (a) providing

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documentary evidence of a chain of title from the original inventor(s) to the assignee, or (b) specifying (by reel and frame number) where such documentary evidence is recorded in the Office (37 CFR 3.73(b)).

#### *Claim Objections*

5. Claim 4 is objected to because lines 3+ are simply a restatement of previously recited limitations.

6. Claim 5 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

#### *Claim Rejections - 35 USC § 103*

7. Claims 1 & 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nomura, WO/18808 (all citations below are taken from the US equivalent, US 6,974,259). Figs. 5 & 6 show a bearing apparatus for a driving wheel of a vehicle comprising: a wheel hub 1, a constant velocity universal joint 3 and a double row rolling bearing 2 assembled as a unit, the wheel hub and an outer joint part member 31 of the constant velocity universal joint are fitted with each other; and a connected portion of the wheel hub and the outer joint member has a plastic deformation mechanism 36c'. Nomura does not expressly disclose that the axial pull-out force of the plastic deformation connection mechanism would be more than 160kN. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nomura such that the axial pull-out force of the plastic deformation connection mechanism

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would be more than 160kN, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

8. Claims 1 & 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sera et al. US 2002/0051597 (Sera). Fig. 7 shows a bearing apparatus for a driving wheel of a vehicle comprising: a wheel hub 80, a constant velocity universal joint 70 and a double row rolling bearing 23 assembled as a unit, the wheel hub and an outer joint part member 70 of the constant velocity universal joint are fitted with each other; and a connected portion of the wheel hub and the outer joint member has a plastic deformation mechanism 75. Sera does not expressly disclose that the axial pull-out force of the plastic deformation connection mechanism would be more than 160kN. However, it would have been obvious to one of ordinary skill in the art to design the bearing apparatus of Sera such that the axial pull-out force of the plastic deformation connection mechanism would be more than 160kN for the same reason noted in item 7 above.

#### *Double Patenting*

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1, 3-5 & 7-9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 of U.S. Patent No. 6,497,515 and claims 1-16 of U.S. Patent No. 6,773,165. Although the conflicting claims are not identical, they are not patentably distinct from each other for the same reason noted in item 7 above.

#### *Response to Arguments*

11. Applicant's arguments filed February 21, 2006 have been fully considered but they are not persuasive. Applicant argues that since Sera discloses crimping in the axial direction, Sera would not be concerned with a pull out force. However, there is no reason to assume that crimping in the axial direction would cause one to be unconcerned with pull out force, particularly given that the purpose of the crimping is to prevent pull out.

#### *Conclusion*

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Binda whose telephone number is (571) 272-7077. The examiner can normally be reached on M-F 9:30 am to 7:00 pm with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Greg Binda  
Primary Examiner  
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